ABSTRACT

An optical data storage device comprised of periodic nanostructured polymer-based material produced from core-shell particles containing one dye in the core and a second dye in the shell. The combinations of dyes can be UV-Vis-dyes or Vis-NIR or UV-NIR. It is shown that *selective* single-photon photobleaching of the two dyes leads to increase in density of data storage and allows one to employ single-photon photobleaching to achieve the same storage density as in two-photon-writing.